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Prospects for Monetary Cooperation in East Asia

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Abstract

The purpose of this paper is to reexamine the exchange rate policy of the Republic of Korea, and its role in promoting financial and monetary cooperation in East Asia in the wake of the 2008 global financial crisis. The Republic of Korea would not actively participate in any discussion of establishing a regional monetary and exchange rate arrangement as it is expected to maintain a weakly managed floating regime. The People's Republic of China (PRC) has been fostering the yuan as an international currency, which will lay the groundwork for forming a yuan area among the PRC; the Association of Southeast Asian Nations (ASEAN); Hong Kong, China; the PRC; and Taipei,China. Japan has shown less interest in assuming a greater role in East Asia's economic integration due to deflation, a strong yen, slow growth, and political instability. Japan would not eschew free floating. These recent developments demand a new modality of monetary cooperation among the Republic of Korea, Japan, and the PRC. Otherwise, ASEAN+3 will lose its rationale for steering regional economic integration in East Asia.

JEL Classification: F3, F4

Contents

1. INTRODUCTION

The 1997–1998 Asian financial crisis marked a watershed in regional economic cooperation and integration in East Asia. It brought to the fore the need for closer cooperation and coordination in policy among the countries in the region in preventing future crises. Realizing the need, the thirteen countries from the region that includes the Association of Southeast Asian Nations (ASEAN)10, the People's Republic of China (hereafter PRC), Japan, and the Republic of Korea—a group known as ASEAN+3—agreed to establish as a first step towards regional cooperation a system of bilateral currency swaps, under the Chiang Mai Initiative (CMI). It was designed to provide liquidity support to the member countries suffering from short-run balance-of-payments problems. Two years later, ASEAN+3 launched another program—the Asian Bond Markets Development Initiative (ABMI)—for the integration of East Asia's regional capital markets.

Since then, the thirteen countries have converted the CMI into a multilateral currency swap agreement–CMI Multilateralization (CMIM)—that covers all ASEAN+3 members with a total amount of US$120 billion for liquidity support. Progress in the ABMI has been slow, but it has been instrumental to the creation of Asian Bond Fund (ABF) I and II, and to the establishment of a regional credit guarantee system; in the future it may aid in the construction of a regional clearing and settlement system for cross-border bond transactions.

Unlike the PRC and Japan, the Republic of Korea could be both a potential lender to, and borrower from, the CMIM. As a small, open economy, it would benefit more from regional economic stability. It could also serve as a mediator between the PRC and Japan on a wide range of issues on which the two countries disagree. Not surprisingly, there was a general consensus that the Republic of Korea should play an active role in promoting ASEAN+3 as a framework for regional integration in East Asia. However, the 2008 global financial crisis has changed this consensus. It has called for a review of the Republic of Korea's exchange rate policy and its strategy for regional financial and monetary cooperation within ASEAN+3.

The financial crisis of 2008 was the first opportunity to put the CMI's effectiveness to a market test. The outcome was not reassuring. Although the Republic of Korea was in dire need of liquidity in 2008, it simply did not consider approaching the CMIM. In fact none of the ASEAN+3 members suffering from a liquidity drought did. Nor were the PRC or Japan prepared to offer any liquidity assistance.

From the beginning, the role of ASEAN+3 has been constrained by a leadership problem stemming from the lack of cooperation between the PRC and Japan—its two dominant economies, which have not seen eye-to-eye on many regional issues. This has hampered the expansion and consolidation of the CMIM. The leadership issue has become more pronounced with the rise of the PRC as a global economic power, making cooperation between the PRC and Japan more complicated and hence casting doubt on the future role of ASEAN+3. In this new setting, the Republic of Korea finds dwindling room to mediate between the conflicting interests of the PRC and Japan.

The purpose of this paper is to analyze the role of the Republic of Korea in promoting financial and monetary cooperation in East Asia. A careful examination of this role demands study of the Republic of Korea's experience with managing the liquidity crisis of 2008, for it had a direct bearing on charting the Republic of Korea's strategy toward regional economic integration. For this reason, Chapter 2 analyzes macroeconomic developments that had begun with an economic downturn early in 2008, followed by financial turmoil exacerbated by a liquidity crunch in the second half of 2009, before financial stability returned in the second quarter of that year. This analysis is then complemented by a review of the causes and consequences of the liquidity crisis,

and the manner in which the Republic of Korea's policy authorities responded to it during this period.

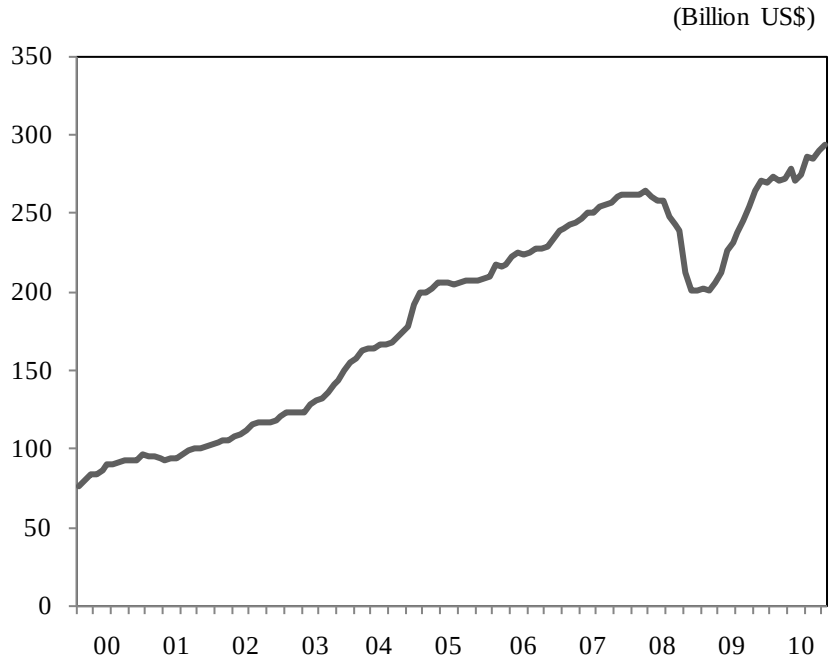
Section 3 discusses the choice of an appropriate regime for exchange rate policy in the Republic of Korea. Here it is argued that despite its limitations, the Republic of Korea will persist with a weakly managed float that invokes foreign exchange market interventions and capital control whenever financial stability is threatened by a surge in, or reversal of, capital inflows caused by sudden changes in market expectation and speculation. Section 4 examines prospects for the Republic of Korea's role in guiding monetary and financial cooperation in East Asia. Section 5 concludes.

2. THE REPUBLIC OF KOREA'S POLICY RESPONSE TO ECONOMIC DOWNTURN AND LIQUIDITY CRISIS: AUGUST 2007–JUNE 2010

2.1 Eruption and Resolution of a Liquidity Crisis: October 2008–March 2009

Unlike other emerging market economies, at the beginning of the United States (US) sub-prime crisis it was widely believed that the Republic of Korea was well poised to deflect or adjust to the crisis without incurring much damage. It had built up a cushion of foreign exchange reserves exceeding US$260 billion at the end of 2007 (see Figure 1), which was seen as excessive by many, on top of having succeeded in strengthening its economic fundamentals through extensive economic reforms since the 1997–1998 financial crisis.

Figure 1: Trend of Foreign Exchange Reserves in the Republic of Korea



Source: Bank of Korea

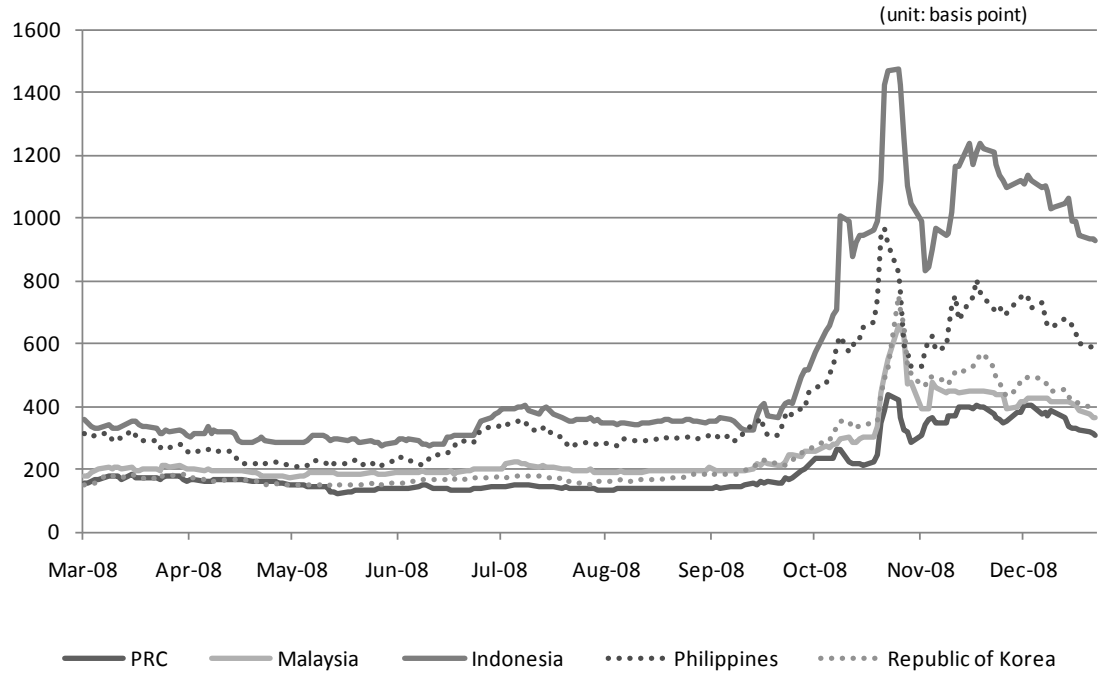
Since the Republic of Korea's financial institutions did not hold sizable amounts of US toxic assets, the outbreak of the US sub-prime crisis itself did not impinge on their soundness or disrupt

the Republic of Korea's stock market. It was also expected that the flexible exchange rate system would provide a first line of defense.[1] Yet, unlike other emerging economies in the region, the Republic of Korea could not avoid a severe US dollar liquidity crunch, which provoked a series of speculative attacks on its currency. In retrospect, it is unquestionable that the Republic of Korea was hit harder than other economies in the region, as it was the only country unable to ward off a run on the central bank foreign exchange reserve without securing additional foreign currency liquidity from the central banks of the US, the PRC, and Japan (Park 2010).

2.1.1 Recession and Liquidity crisis

The global financial crisis did not reach the Republic of Korea until the last quarter of 2008; much of the growth slowdown during the first three quarters was brought on by weak domestic demand, which was in part caused by the tighter stance of monetary and fiscal policy chosen by the Republic of Korea's policymakers to arrest rapidly rising prices.

Figure 2: Sovereign Spreads: Foreign Currency Denominated Sovereign Bond Spreads (vs US Treasury note)



Source: Korea Center for International Finance

However, the deficit on the current account in the first half of 2008 on top of the slowdown appears to have worsened the prospects for the Republic of Korea's economy even before it was hit by a liquidity crisis in the third quarter of the year.

As the US sub-prime crisis spread to other parts of the world, foreign investors and lenders began retreating from East Asia, to deleverage and to increase the share of safe assets in their portfolios. Compared to the rebalancing of their portfolios elsewhere in Asia, foreign investors

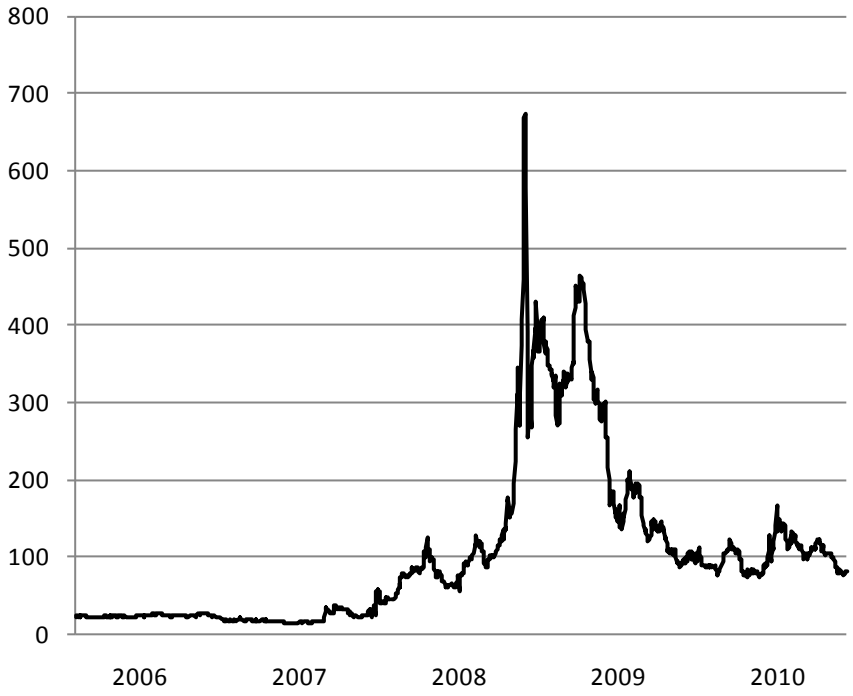
[1] According to the International Monetary Fund (IMF)'s revised classification of the foreign exchange rate arrangement, Korea's exchange rate system is classified as floating (IMF 2010).

divested themselves of relatively more of their holdings in Korean financial assets, because they were led to believe that deterioration in some of financial market indicators made the Republic of Korea much more vulnerable to a financial crisis than other emerging economies. Since the Republic of Korea's financial markets were relatively larger and more liquid than those of other East Asian emerging economies, it was also easier for them to sell out of the Republic of Korea. The share of foreign investors in the capitalization of the stock market was close to 31% at the end of 2007. A year later it fell below 27%.

Foreign banks had also become more averse to renewing their short-term loans to Korean financial institutions, until they saw an improvement in the current account and a better growth prospect in the early months of 2009. After the demise of Lehman Brothers in September 2008, Korean banks were increasingly hard-pressed to roll over their short-term foreign currency loans. At the lowest point in November, the renewal rate fell to below 40% (Table A1 in Appendix). The decline in the rollover rate led to large capital outflows and a deficit on the financial account in addition to a current account deficit of US$7 billion, leading to a loss of almost 20% loss in foreign exchange reserves.

Not surprisingly, these deficits brought about a dollar liquidity shortage and subsequently curtailed the availability of foreign-currency (mostly US dollar) loans. Reflecting the worsening of the liquidity crisis, both the sovereign spread and credit default swap (CDS) premiums began a steep rise. At the height of the crisis on 27 October, the debt spread and CDS premium jumped up to 751 and 700 basis points respectively (Figures 2 and 3), sending foreign investors' confidence in the Korean economy crashing to the bottom.

Figure 3: Credit Default Swap Premium on the Republic of Korea's Government Bond

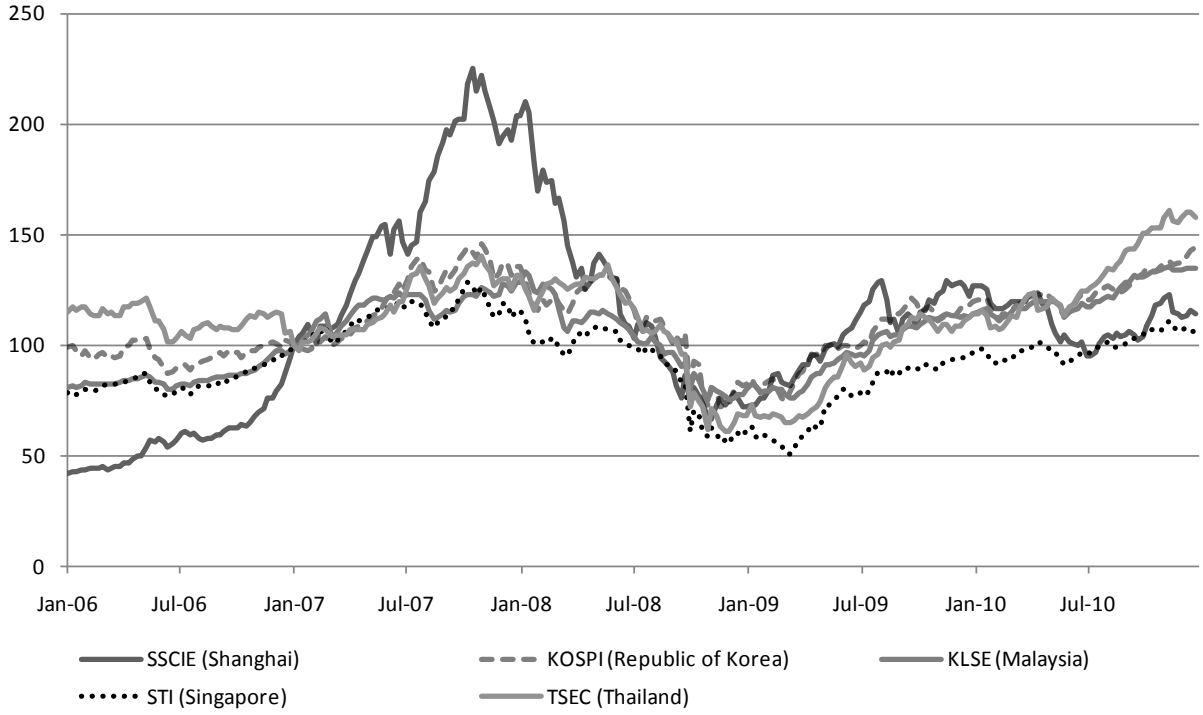


Note: 1) Credit Default Swap premium on the Republic of Korea's government five-year foreign exchange stabilization bond

Source: Bloomberg

The crisis hit both stocks and the foreign exchange markets hard. After breaking the 2,000-point level in October 2007, stock prices measured by the Korea Composite Stock Price Index (KOSPI) began a sharp slide, falling below 1,000 by November 2008, one of the worst performances among East Asia's stock markets (Figure 4).

Figure 4: Stock Price Movements in East Asia



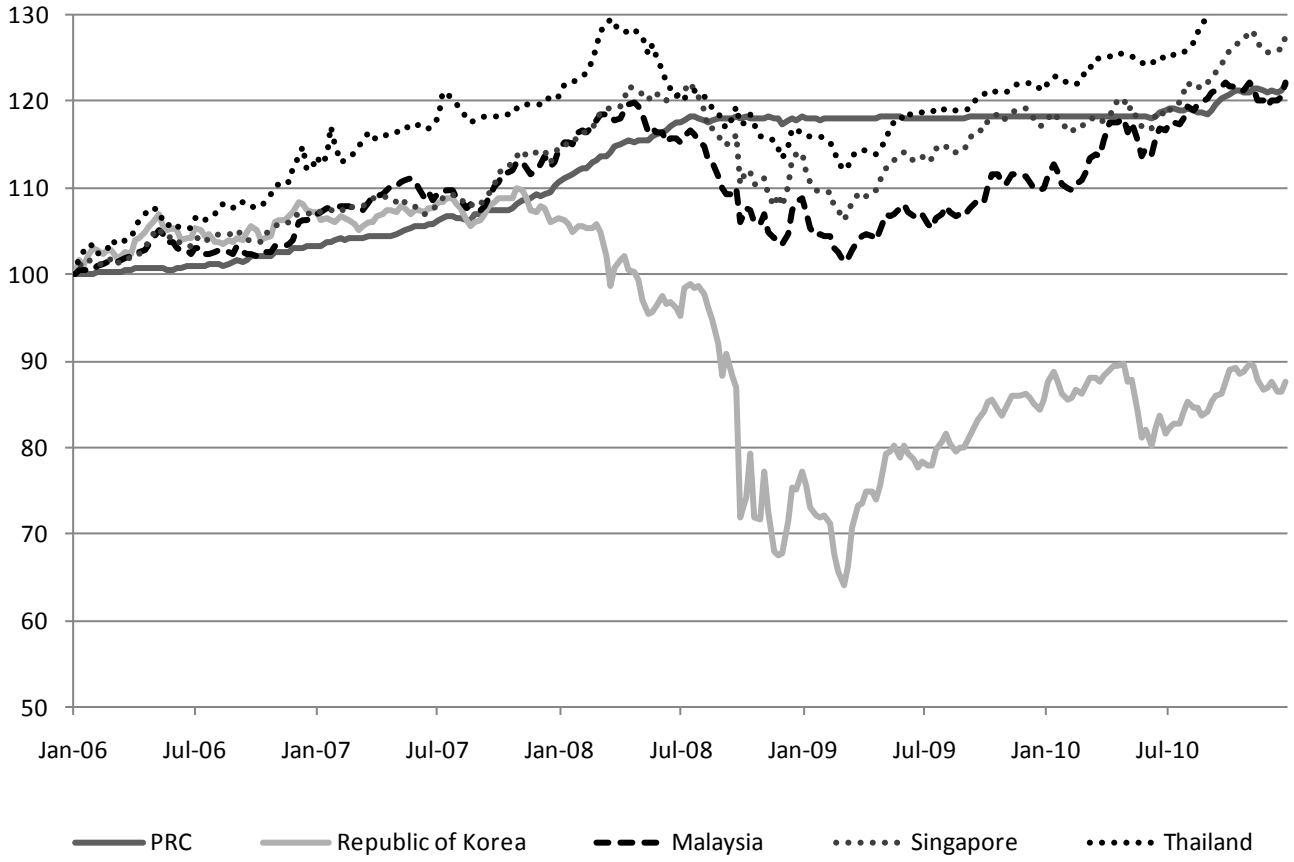
Source: Asia Regional Integration Centre of Asian Development Bank (ADB), Economic and Financial Indicators Data Base, http://aric.adb.org/macro_indicators.php

The nominal exchange rate, which had remained below 1,000 won per US dollar during the first quarter of 2008, began a sharp depreciation in April to reach a high of 1,513 won per US dollar on 24 November. Among the East Asian currencies, the Korean won lost most in value vis-à-vis the US dollar that year (Figure 5).

The high degree of instability in the exchange rate stems from two features of the won-US dollar market. Firstly, it is small and shallow, as the number of market participants is limited. On average, the volume of daily foreign exchange trading was less than 1.9% of gross domestic product (GDP) in 2007. Because of its small size and lack of liquidity, the market was overwhelmed by a series of external shocks that followed the collapse of Lehman Brothers, precipitating a large depreciation and a wide range of fluctuations of the exchange rate. Another feature is that changes in the won/dollar exchange rate have been closely linked with changes in stock prices. As a result, dramatic changes in stock prices have therefore been translated into equally large changes in the foreign exchange rate in the Republic of Korea (see Figure 6).

There is no universally accepted definition of a currency crisis. But when a currency depreciates by more than 45% over a six-month period (July–November), and almost 22% over a month as it did in the Republic of Korea in October 2008, it must be said to have come under a speculative attack, with its downfall sure to touch off a financial crisis.

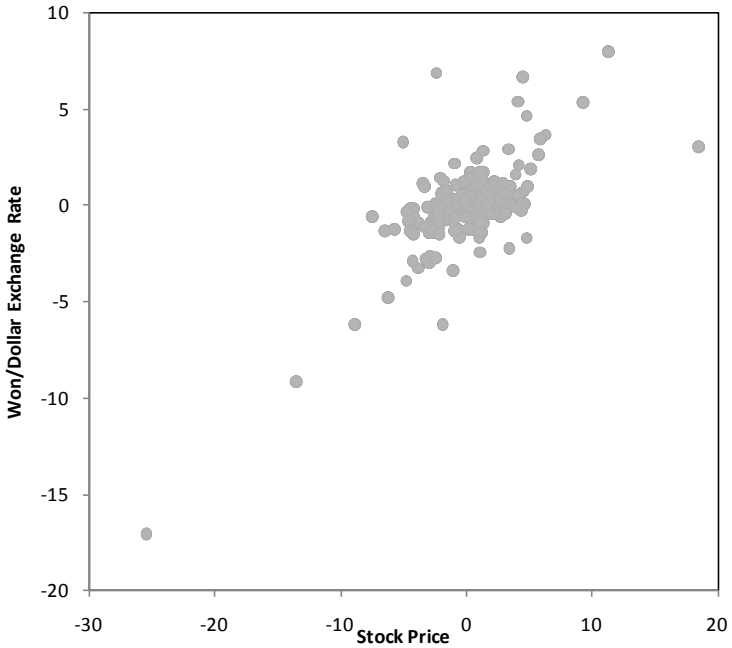
Figure 5: East Asian Exchange Rates against the US Dollar



Note: 1) An increase indicates nominal appreciation of the local currency against the US dollar. 2) January 2006 = 100

Source: Asia Regional Integration Centre of ADB, Economic and Financial Indicators Data Base, http://aric.adb.org/macro_indicators.php

Figure 6: Changes in Stock Prices and Exchange Rates in the Republic of Korea



Note: 1) Rate of changes in weekly average of won/US dollar exchange rate and Korea Composite Stock Price Index

Source: Bank of Korea

2.1.2 Causes of the Crisis

At the beginning of the crisis, there must have been structural vulnerabilities of the economy and deterioration in macroeconomic indicators that frightened foreign lenders and investors to rush to the exit en masse. Were they serious enough to pose systemic risk to the economy in general, and the financial system in particular?

Park (2010) has identified a number of structural weaknesses of the Korean economy, which were often claimed by foreign analysts to have been at the root of the liquidity crisis. On the real side of the economy, the main culprit for the recession and currency speculation was vanishing export markets. The concentration of exports in a limited number of manufactures and producers was another cause of the deeper recession. In 2007, 57% of total exports were shipped out by four industries—automobile, shipbuilding, electronics, and chemicals. Over the past decade, the top ten export products comprised more than 65% of the Republic of Korea's total exports, as shown in Table A2 in the Appendix. The ten largest industrial groups made up 80% of the Republic of Korea's total exports in 2007. A setback in export earnings would then undermine the financial health of the groups that constitute the backbone of the Korean economy. The global demand for manufactures is more income elastic than other categories of exports, and hence more sensitive to cyclical fluctuations of the global economy. As shown by Blanchard (2009), compared to countries with a diversified mix of export products, those with a heavy concentration in a limited number of manufactured export goods were hit harder by the 2008 global financial crisis.

These vulnerabilities of an export-led regime were exacerbated by the deterioration in a number of macroeconomic and financial indicators—the emergence of a current account deficit in the first half of 2008, a sharp increase in short-term external debt as a percentage of foreign exchange

reserves, and a rise in banks' loan-deposit ratio.[2] While there are doubts as to whether these indicators are reliable measures of systemic risk, there was little doubt that they had worsened much more in the Republic of Korea compared with other emerging economies in East Asia,.

These macroeconomic woes were further aggravated by a substantial increase in both maturity and currency mismatching in the balance sheets of banks and other financial institutions, and undisciplined capital account liberalization[3]. The latter set off massive capital outflows in the form of portfolio investments abroad by the Republic of Korea's institutional and private investors in 2006 and 2007, the bulk of which were financed by short-term external borrowing (Park 2010). Cumulatively, all these fragilities were serious enough to trigger an overreaction on the part of foreign investors, placing the Republic of Korea in a crisis zone by the end of September 2008.

2.2 Crisis Management and Macroeconomic Policy

Faced with a dwindling export market, dollar liquidity shortage, and the prospect of a long drawn-out recovery, the Korean government set out to implement a three-pronged strategy for crisis management. This consisted of expansionary monetary and fiscal policy, free floating complemented by securing additional foreign exchange reserves, and a swift restructuring of ailing banks and firms. The Bank of Korea lowered its base rate, and the fiscal authorities introduced two fiscal stimulus packages for 2009, amounting to 2% and 1.7% of GDP, respectively.

As a trade off for stimulating domestic demand, there was a high probability that expansionary monetary and fiscal policy would worsen the current account and induce capital outflows. Realizing this, the Republic of Korea's policy authorities refrained from intervening in the foreign exchange market with the belief that a large depreciation would help moderate deterioration in the current account and generate expectations of appreciation. At the same time, they sought to prevent speculative attack by replenishing foreign exchange reserves through external borrowing and currency swaps with the US, the PRC, and Japan. As they did during the 1997 Asian financial crisis, the Korean government also sought to restore foreign investors' confidence in the economy by issuing sovereign guarantees on new foreign loans maturing before the end of June 2009, up to US$100 billion in value, on October 12, 2008. However, similar guarantees had failed to allay fears of financial meltdown at the beginning of the Asian crisis in 1997, and this time they failed again.

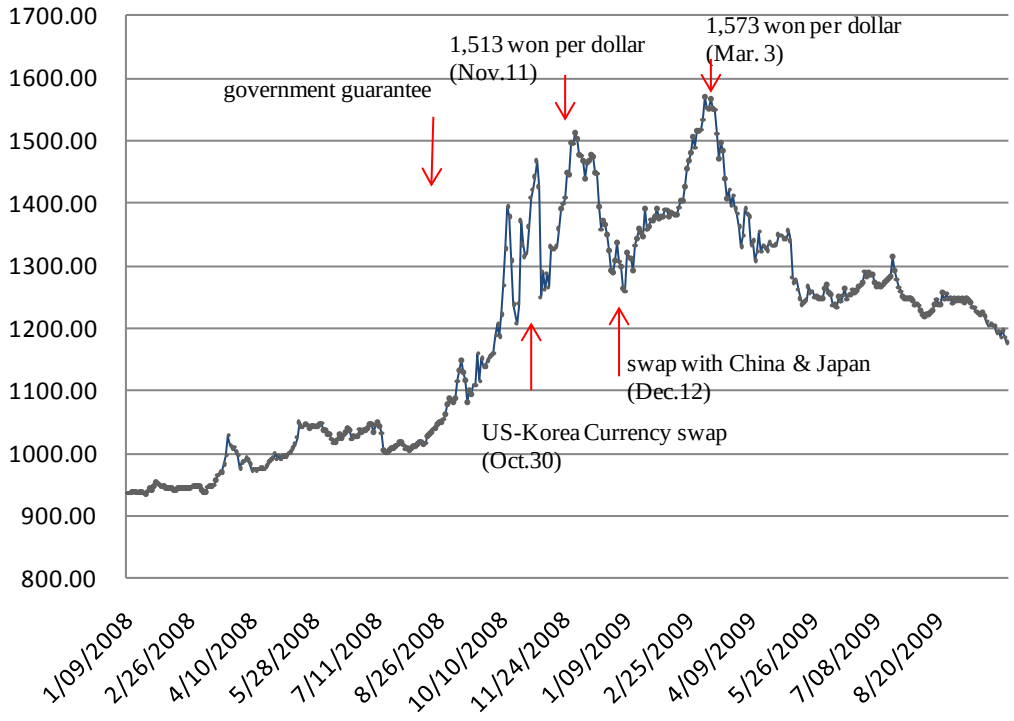
As in 1997, the market was not persuaded by these measures. Only when the Republic of Korea secured a swap line amounting to US$30 billion from the US Federal Reserve on 30 October, 2008 did the foreign exchange market settle down somewhat, but not for very long, as the exchange rate shot up to 1,513 won per dollar three weeks after the swap was announced (Figure 7). The swap was apparently not enough to remove uncertainties surrounding the Republic of Korea's ability to service its foreign debt, in view of large amounts of bonds held by foreign investors maturing and large numbers of foreign loans to be renewed in the first quarter of 2009. The Republic of Korea subsequently succeeded in arranging won-local currency swaps with the

[2] An overall risk ranking of emerging economies constructed by the bank HSBC in terms of the three indicators placed Korea as the third most vulnerable to a currency crisis among emerging economies. See The Economist, 15–21 February 2009.

[3] After the 1997 Asian financial crisis, Korea's financial regulatory authorities instituted a number of prudential regulatory measures to minimize the incidence of the two balance sheet mismatches, but these restrictions were not effective in the banking industry, which was engaged in asset transformation of short-term liabilities into long-term assets and which was unable to borrow from abroad in the domestic currency (Park 2010).

central banks of both the PRC and Japan, each amounting to an equivalent of US$30 billion on 12 December 2008.[4]

Figure 7: Fluctuations of the Won/Dollar Exchange Rate since the Breakout of the Global Financial Crisis



Source: Bank of Korea, Economic Statistics System, http://ecos.bok.or.kr/.

These additional swaps, together with the renewal of the Federal Reserve swap and a current account stronger than expected appear to have calmed down the market for a while. But thereafter the exchange rate went on a roller coaster ride, shooting up to 1,573 won per dollar on 3 March 2009 before falling below 1,300 at the end of June.

Was this three-part strategy effective? Several pieces of evidence, including a substantial improvement in the current account and positive growth, quarter on quarter, in the first two quarters of 2009, suggest that it was. More importantly, for all practical purposes the liquidity crisis was over by the end of the first quarter of 2009. Which measure of the three-part strategy had been more effective in turning around the crisis? Most analysts would agree that the US Federal Reserve played a catalytic role in improving the market sentiments about the prospect for the Korean economy.

3. Regime Choice for the Republic of Korea's Exchange Rate Policy

Like many other emerging economies, the Republic of Korea has a relatively large menu of choices for its exchange rate regime. It could stay on with a managed float or independently

[4] Japan was reported to have been reluctant to offer a yen-won swap line. It asked the Republic of Korea to approach the IMF if more liquidity was needed as a condition for the swap. The swap line was included in the CMI Japan-Korea bilateral swap.

floating, as it has done so far, or shift to either free floating or pegging to a basket of the currencies of its major trading partners. As discussed in the previous section, the crisis experience raises some doubts as to the efficiency of free floating in heading off external financial shocks and stabilizing domestic financial markets. However, neither does the basket peg appear to be a realistic option. This assessment leaves managed floating as the most appropriate choice for the Republic of Korea's exchange rate regime, since the exchange rate is essentially market determined, but the monetary authority has room to change the level of the exchange rate without specifying a specific exchange rate path or target.

3.1 Free Floating

When the crisis broke out late in 1997, on the International Monetary Fund (IMF)'s recommendation, the Republic of Korea moved to adopt a flexible exchange rate system as a means of stemming capital outflows and to restore balance on the current account. Since then, according to the IMF assessment of exchange regimes of its members, the Republic of Korea's exchange rate regime had been classified as independently floating. Under this regime, the exchange rate is market-determined as in managed floating, but the monetary authority may intervene in the foreign exchange market mostly to reduce the amplitude of fluctuations in the exchange rate, rather than its level, in the short-run.

In 2009, the Republic of Korea was reclassified as a floater. According to the new IMF definition, independently and managed floating are subsumed under a single category. In this classification, floating does not mean total abstinence from market intervention. Several pieces of evidence suggest that since the introduction of independently floating, the Korean authorities have not been averse to intervening in the foreign exchange market to induce depreciation or prevent appreciation of the Korean won. For this reason, the Republic of Korea's exchange regime is closer to managed floating.

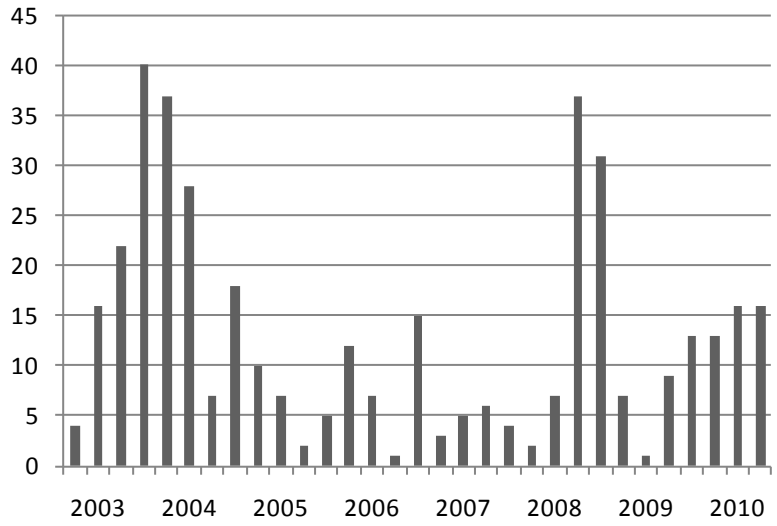
The monetary authority has intervened not only to prevent excessive depreciation or appreciation of the won/dollar exchange rate, or to reduce its volatility around the trend, but also on many occasions to improve the Republic of Korea's export competitiveness (Park and Kim 2008). Prima facie evidence for this type of intervention is a large accumulation of foreign exchange reserves, which amounted to almost US$300 billion by the end of 2010. This evidence is also corroborated by the frequency estimates of intervention as shown in Figure 8 and Table A3 in the Appendix, which roughly correspond to stability indices suggested by Bayoumi and Eichengreen (1998) and Baig (2000) in Figure 9, where lower indices correspond to more intensive interventions in the foreign exchange market by the authorities.[5]

The frequency of market intervention, together with a visual inspection of the data, also suggest that the Korean authorities had actively been engaged in stabilizing the Republic of Korea's real effective exchange rate between 2002 and 2004, as shown in Figure 10. For the three years up to 2007, the frequency of interventions declined considerably as the Korean authorities were trying to engineer a gradual appreciation of the won to trim a growing surplus on the current account.

The crisis was a bitter reminder that the Republic of Korea did not have many places to turn to for dollar liquidity when it needed it most. It also underscored the need to hold a large amount of foreign exchange reserves for self-insurance. Not surprisingly, therefore, since stability in the foreign exchange market was restored in the second half of 2009, the Korean authorities have been intervening heavily again to generate and sterilize current account surpluses.

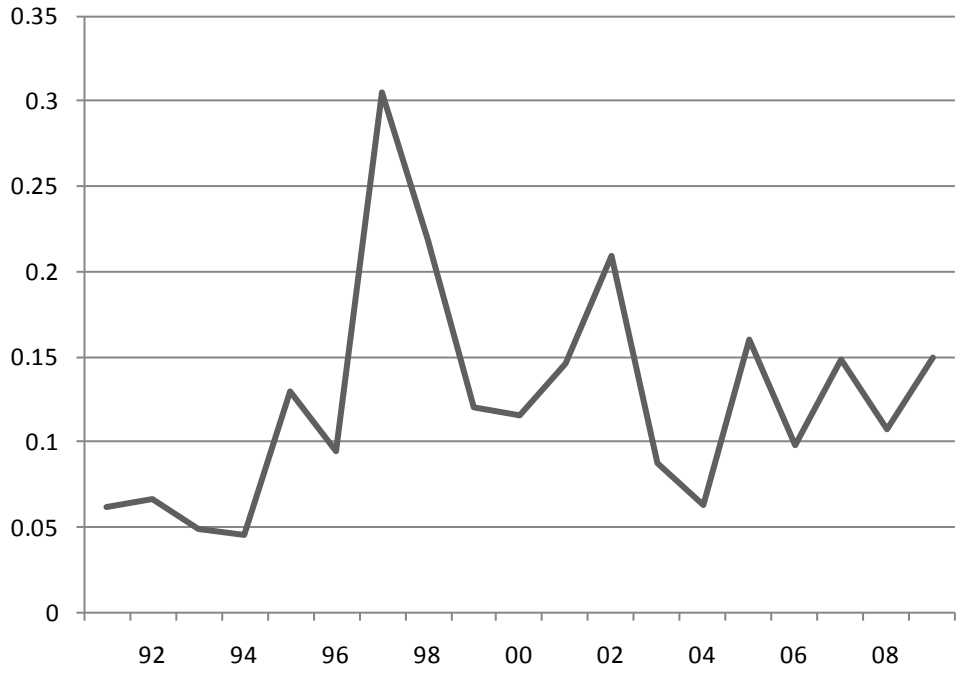
[5] Following Bayoumi and Eichengreen (1998), the foreign exchange rate flexibility is estimated as follows: Index =SDEX/(SDEX+SDREV) where SDEX= standard deviation of exchange rate changes, and SDREV=standard deviation of the ratio of changes in foreign reserves divided by lagged base money.

Figure 8: Frequency of the Republic of Korea's Interventions in the Won/Dollar Foreign Exchange Market



Note: 1) The year of 2010 includes the months from January to September
Source: Park and Kim (2008) and author's estimates

Figure 9: Won/Dollar Exchange Rate Flexibility Index



Note: 1) Author's estimates based on Bayoumi and Eichengreen (1998)

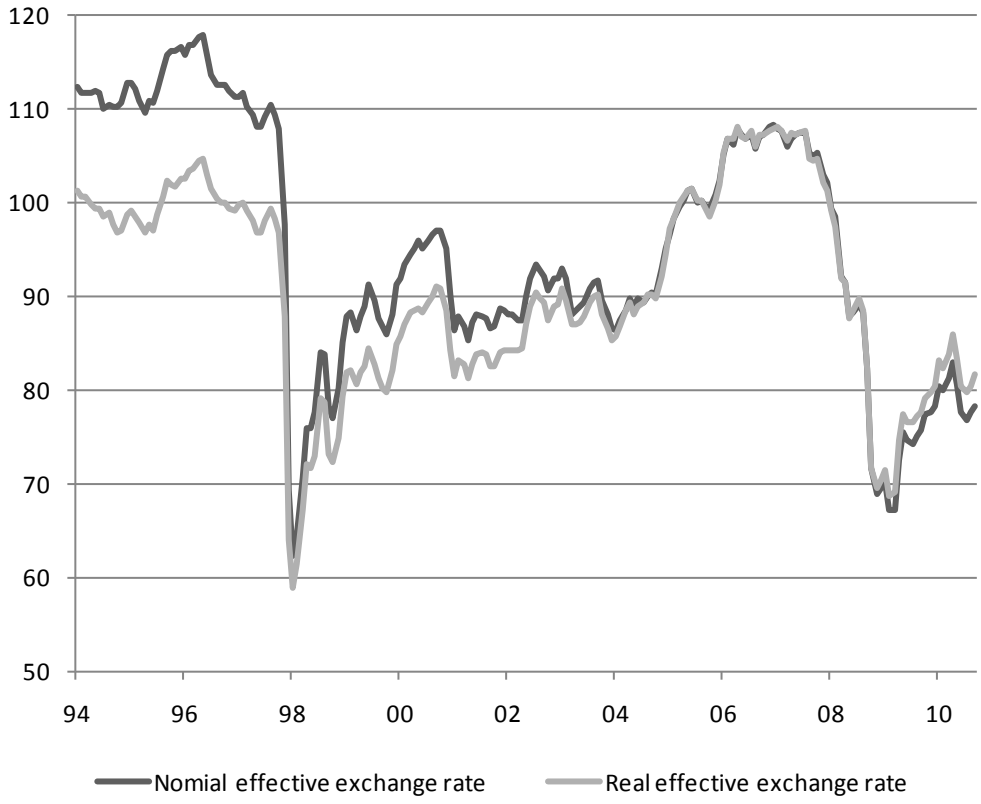
Source: Author's calculations

3.2 Limitations of Free Floating

The Republic of Korea's experience with the liquidity crisis management presents another piece of evidence that free floating may not moderate capital outflows once a crisis breaks out, and hence stop a run on the central bank reserve. As is well known, this would happen if the formation of expectations were extrapolative, causing speculation in the foreign exchange market to put the nominal exchange rate on an implosive trajectory.[6]

A depreciation of almost 50% over a three-month period until November 2008 did not stop speculators from dumping their holdings of the local currency. Currency speculators did not stop selling the won after it had clearly depreciated below its long-run equilibrium. In fact, they did not seem to care to know what the long run value of the currency was when the country was steeped in a crisis. Under these circumstances, there is no reason to believe that a further depreciation could have stopped capital outflows.

Figure 10: Nominal and Real Effective Exchange Rates of the Korean Won



Note: 1) The rise of the index indicates appreciation.

Source: Bank of International Settlements

[6] Behavioral economists have long argued that human beings tend to be too confident of their own abilities and tend to extrapolate recent trends into the future–a combination that may contribute to bubbles. Lansing (2006) has developed an asset pricing model where extrapolative expectations can generate excess volatility of stock prices, time-varying volatility of returns, long-horizon predictability of returns, bubbles driven by optimism about the future, and sharp downward movements in stock prices that resemble market crashes. All of these features appear to be present in long-run US stock market data.

A large depreciation is often seen as symptomatic of structural problems that could undermine a country's ability to service foreign debt, rather than as an adjustment process. This perception often induces foreign exchange traders to assess higher risk premiums on foreign exchange markets, which then work through asset markets to cause further nominal depreciation without corresponding changes in macroeconomic economic variables (Duarte and Stockman 2005). They then sell more of the currency in the expectation of further depreciation. The herding among incompletely informed traders then realizes the expectation of depreciation.

Destabilizing speculation in the foreign exchange market is likely to occur more often in small open economies, where the size inconsistency of the foreign exchange market exacerbates the volatility of the exchange rate. To large foreign private and institutional investors, their exposure to an individual emerging economy like the Republic of Korea often accounts for a very small share of their total investments. But to a small emerging economy with shallow and illiquid domestic financial markets, financial investments of these foreign investors can be large, beyond its absorptive capacity, and dictate movements of local financial prices including the exchange rate.

Global investors continuously reappraise their investment risks and adjust their regional and country exposures in response to changes in market conditions at the regional and country level. When foreign investors decide to reduce their exposure to East Asia's emerging economies, they often liquidate their holdings of financial instruments without discriminating between countries and securities. Their withdrawal may comprise a small portfolio adjustment, but it could have a large impact on these countries' small and illiquid domestic financial markets, causing an unbearably large change in financial prices including the foreign exchange rate. Few countries could withstand such a large decline without endangering the stability of domestic financial markets.

3.3 Basket Pegging

If free floating is not a viable regime, could the Republic of Korea entertain adopting an alternative system from a variety of basket pegging arrangements? This choice is not going to be any more acceptable than free floating because of the role of the PRC.

The PRC has become the Republic of Korea's largest trading partner, accounting for more than 25% of the Republic of Korea's total exports in 2010, which is more than the combined share of both the US and Japan. This large share means that if the Republic of Korea were to adopt a basket peg, the yuan would have the lion's share of the basket, and in fact more than its trade weight when the Republic of Korea's small traders are excluded from the basket.

According to a recent study by Jeong (2009), more than 70% of the Republic of Korea's total exports to the PRC consisted of intermediate products in 2008. Since 2005, when the share reached an all time high of 82%, it has been declining, but it is still one of the highest among the PRC's trading partners. At the same time the PRC has been the Republic of Korea's major source of imports of intermediate products, with a share of almost 64% in 2008.

Prema-Chandra and Menon (2010) showed that trade in parts and components is not sensitive to changes in relative prices, implying that changes in the exchange rate may not be effective in restoring balance in the current account in countries belonging to the network trade. Under these circumstances, a basket peg would mostly dictate that the Republic of Korea stabilize its currency against the yuan. That is, the Republic of Korea would end up pegging to the yuan.

To examine this possibility—that is, the extent to which the won/dollar exchange rate responds to changes in the yuan/dollar exchange rate—the following autoregressive equation has been estimated using daily data during the period from July 22, 2005 to the end of June 2008, during which the PRC was on a managed float. A recent period is excluded in the estimation to remove

the impact of the global economic crisis on regional currency movements, and to avoid a sample bias caused by the PRC's return to a dollar peg.

$$\Delta X_t^i = C + \sum_{k=1}^{m} \beta_k \Delta X_t^i + \beta_{m+1} \Delta RMB_t + \beta_{m+2} \Delta Yen_t + \varepsilon_t, \quad (1)$$

Where X_t^i is the dollar exchange rate of the i^{th} country at time t, and the yuan/dollar and yen/dollar exchange rates. All variables are in natural log.

Table 1: Effects of Change in the Yuan/Dollar Rate on the Exchange Rate of East Asian Currencies

Variables	Indonesia Rupiah/US$	Rep.Korea Won/US$	Malaysia (Ringgit/US$)	Philippines (Peso/US$)	Singapore (S$/US$)	Taipei,China (NT$/US$)	Thailand (Baht/US$)
Δx_{t-1}	-0.050	-0.031	-0.007	-0.061	-0.056	0.057	-0.173**
	(-1.388)	(-0.812)	(-0.194)	(-1.671)	(-1.690)	(1.696)	(-5.109)
Δx_{t-2}	-0.089**	0.053				0.005	0.168**
	(-2.480)	(1.380)				(0.140)	(4.998)
ΔRMB_t	0.105	0.619**	0.505**	0.232*	0.491**	0.433**	0.478**
	(0.611)	(4.357)	(5.652)	(1.933)	(6.172)	(5.741)	(4.404)
ΔYen_t	0.065*	0.008	0.005	-0.051	0.133**	0.120**	0.146**
	(2.062)	(0.029)	(0.321)	(-0.690)	(9.128)	(8.559)	(7.282)
D-W	1.981	2.017	2.043	2.003	2.024	1.992	2.023
R^2	0.017	0.035	0.044	0.008	0.180	0.158	0.166

Notes: (1) Figures in parentheses are t-statistics; (2) ** and * denote significance at 1% and 5% level, respectively; (3) Estimates of the constant terms are not reported for the lack of space; (4) D-W: Durbin-Watson Statistics; (5) Sample period: 22 July 2005–30 June 2008; Rep.Korea = The Republic of Korea

Source: Author's estimation.

The estimation results show that the sign of the coefficient of the yuan/dollar exchange rate is positive and statistically significant. A one percentage point change in the yuan/dollar exchange rate leads to 0.62% change in the won/dollar exchange rate during the sample period.[7] Even in a floating regime, the won has moved closely with the yuan. This close association has prevailed, because, given the vertical intra-industry trade integration, other things being equal, an appreciation of the yuan will reduce the PRC's exports to the Republic of Korea. However, it is not clear what will happen to the PRC's imports from the Republic of Korea. The vertical integration in trade suggests that the PRC's imports may fall rather than increase. But even in that case, if the dollar exchange rate of the Korean won remains unchanged, the PRC's imports of intermediate products from the Republic of Korea in yuan will be cheaper than before and hence will not fall as much as they would otherwise.

At the same time, the Republic of Korea will be able to cut into the PRC's export markets in the US and Europe. For these reasons, the market expects that yuan appreciation would improve the Republic of Korea's current account and drive up the value of the won relative to the US dollar. Because of this market reaction, the dollar exchange rates of the PRC and the Republic of Korea are likely to move together. Once a basket peg is adopted, the movements of the two currencies would be much closer than in the case of floating.

The increase in intra-industry trade with, and geographical proximity to, the PRC suggest that the Republic of Korea may benefit from forming a currency union with the PRC, but as shown by Park and Song (2011), as far as responsiveness to various shocks is concerned, they are asymmetric. Neither the demand nor the supply shocks of the two countries are highly correlated. Global shocks account for one third of output variations in the PRC, but it is regional shocks that cause relatively large variations in domestic output in the Republic of Korea. These asymmetric features may become less distinct over time, as consumption and capital goods as a share of intra-industry trade between the two countries increase. Nevertheless, if the Canada-US exchange rate

[7] It should also be noted that the co-movements of the dollar exchange rates of these sample economies with the yuan/dollar exchange rate could result partly from the shocks to the US economy, which change the overall value of the US dollar vis-à-vis the other currencies including those of East Asian economies

relationship is any guide, the Republic of Korea is highly unlikely to eschew its current regime of free floating in favor of a basket peg.

3.4 A Weakly Managed Float

If neither free floating nor basket pegging is a workable exchange rate regime, the Republic of Korea would benefit most from a weakly managed float: free floating with a prudential system of capital controls and foreign exchange market interventions. In this regard, Canada's experience with free floating is instructive for the Republic of Korea's regime choice.

Canada and the US share the same open border and cultural heritage, and use the same language. More than 75% of Canada's exports were shipped to the US in 2009, and more than 51% of its imports originated there. In many economic respects, the PRC is to the Republic of Korea what the US is to Canada. Yet Canada does not appear to believe that it is in its interest to form a currency union with the US. Citing the asymmetry of shocks and the loss of monetary independence, which would subject Canada to US monetary policy, Murray (2000) argued against the creation of a Canada-US monetary union. Thiessen (2000) and Dodge (2005) also questioned the economic viability of such a union, on the grounds that it would threaten Canada's monetary independence.

For a similar reason, monetary independence, which may symbolize and help protect the Republic of Korea's political independence, will eventually dictate the Republic of Korea's decision to stay on with free floating. However the Republic of Korea's exchange regime is not going to be a pure float: it will be complemented by intervention in foreign exchange markets and capital controls to be invoked whenever a large increase in or sudden reversal of capital inflows, caused by changes in market expectations, threatens financial stability.[8] The Republic of Korea has also been exploring the possibility of internationalizing its currency, with the expectation that such a transformation would help the country to borrow abroad in won.

4. PROSPECTS FOR REGIONAL MONETARY AND FINANCIAL INTEGRATION IN EAST ASIA

4.1 Overview

Since the 2008 global financial crisis, there have been a number of developments in and outside the region that have weakened the momentum for economic integration in East Asia. One such development has been a leadership vacuum: neither the PRC nor Japan is willing or prepared to lead the integrationist movement in East Asia.

As the second largest and most advanced economy in the region, Japan had been at the forefront of mobilizing regional efforts to garner political and public support for regional economic integration. It was Japan that advocated the creation of an Asian Monetary Fund during the 1997–1998 Asian financial crisis. Japan also took the lead in launching the ABMI and campaigned for the introduction of a regional currency unit, on the lines of the Ecu, as a means of stabilizing bilateral exchange rates of the members of ASEAN+3. However, in recent years deflation, a strong yen, slow growth, and political instability have prevented Japan from assuming a greater regional role in East Asia.

[8] The IMF also sees the need for resorting to capital controls to mitigate the impact of large speculative capital inflows and outflows. See Ostry et al. (2011)

The PRC has also shown a lack of interest in regional economic integration, but for a different reason. Unlike Japan, it has been increasingly preoccupied with its global rather than regional role. Not only for economic but also for strategic reasons, the PRC's policymakers have traditionally placed greater emphasis on integration with its neighboring economies, such as ASEAN member states, than with either Japan or the Republic of Korea. The PRC's asynchronous business cycle means it is not likely to reap large benefits from participating in East Asia's regional integration (Park and Song 2011).

Furthermore, as Eichengreen (2009) points out, the PRC might not have to participate in, or lead promotion of, any regional arrangements to attain greater political and economic influence in the region. Instead of trying to emulate the European approach to regional integration, all it has to do is wait. The longer it waits, the stronger will be its economic position in the region. Eventually the large export market the PRC presents to other member states of ASEAN+3 will be an incentive strong enough to bring them into its fold.

For other members of ASEAN+3 as much as for the Republic of Korea, the failure of the CMIM as a regional liquidity support system during the 2008 global financial crisis has not inspired much confidence in the future role of ASEAN+3. It may be also true that the eurozone crisis has made ASEAN+3 members realize that the costs of regional monetary cooperation would be much higher than is often claimed, and more so in a region characterized by a higher degree of heterogeneity in economy profiles than in Europe. More than anything, however, the emergence of a free trade area in a region where the PRC will be the hub and the yuan will be the dominant trade invoicing and settlement currency, will determine the future of ASEAN+3.

4.2 Emergence of an "ASEAN+New3" yuan Area[9]

In recent years, the PRC has taken concrete steps to internationalize the yuan. At this early stage of internationalization, the yuan is expected to be used in invoicing and settling trade mostly with its neighboring economies in Southeast Asia. Deepening of trade integration centering on the PRC in the region will increase the usage of the yuan as an invoicing currency. This wider usage will in turn expand intra-regional trade. In so doing, trade integration and yuan internationalization will reinforce each other, to lay the groundwork for the creation of a yuan area among the thirteen economies in East Asia: ASEAN10; the PRC; Taipei,China; and Hong Kong, China.

The yuan's internationalization will likely follow a three-stage process in which it will be first used as a currency for pricing and settlement of bilateral trade with the PRC, for denomination of globally traded financial instruments at the second stage, and for holding reserves at the final stage. Over time, with the PRC's rapidly growing economy and its large share in global trade, the yuan may ultimately acquire an international status commensurate with its economic weight and trade scale.

To many pundits, however, the prospects for the elevation of the yuan to a fully-fledged international currency are hardly promising. They argue that unless the PRC is prepared to open its financial markets and to make the yuan fully convertible, the currency may never obtain a global status. They also point out that as a group, the thirteen economies hardly qualify for membership in a monetary union. In some of these countries, anti-Chinese feelings run deep and growing assertiveness in territorial disputes with the PRC may have aggravated these sentiments. However, a series of recent developments in trade in the region appear to have improved these adverse conditions and changed the future prospects of the yuan for the better.

[9] This section draws on Park and Song (2011)

In economic relations, ASEAN and Taipei,China, are increasingly integrated with the PRC through the formation of Free Trade Agreements (FTAs): the ASEAN-PRC FTA and Preferential Trade Agreement between the PRC and Taipei,China. In addition, the PRC has been playing a leading role in the development of the Greater Mekong Sub-region. The informal network of ethnic Chinese traders throughout East Asia has served as a conduit for booming trade between the PRC and ASEAN.

Even before the ASEAN-PRC FTA entered into force at the beginning of 2010, total trade between ASEAN and the PRC was growing at a double-digit rate. Since the FTA took effect, there has been a phenomenal increase in trade between the PRC and ASEAN. During the first six months of 2010, ASEAN's total exports to the PRC rose more than 86% and its imports by 63% year-on-year. As a result, the share of the PRC in ASEAN's total exports jumped to 13% in the first half of 2010 from less than 10% a year earlier. If Taipei,China were to join the ASEAN-PRC FTA, a larger free trade area with the PRC as the hub would come into existence with had a combined GDP of US$6.8 trillion in 2009. Total exports of the "ASEAN+New3" economies (ASEAN; the PRC; Hong Kong, China; and Taipei,China) amounted to US$2.6 trillion in the same year. As a whole the group imported a lot less, running a current account surplus of US$463 billion, which was equivalent to 91% of the US trade deficit, in 2009. The ASEAN+New3 FTA will also be supported by the two regional financial centers—Hong Kong, China; and Singapore—and an emerging center in Shanghai.[10]

In the beginning, it is expected that the Chinese planners would aim at promoting the yuan as a regional rather than a global currency. This strategy has several appealing features for Chinese policymakers, and might be the most realistic and expedient approach to take. One such feature is that the formation of a yuan area is likely to be a rather natural evolutionary outcome of trade integration with neighboring countries. Another attractive feature of the strategy is that, although in establishing an yuan area the PRC will need to deregulate and open its financial markets, the extent of financial liberalization and opening required for the regionalization will not be as extensive as with following a global approach. All the PRC might have to do is to supply an adequate amount of offshore yuan liquidity and create financial instruments in yuan that investors from other members of the yuan area can invest in.

4.3 Prospects for Regional Integration in East Asia

Japan has also established a comprehensive economic partnership agreement with ASEAN. It has been sending an increasingly large share of its exports to the PRC. Yet it is inconceivable that it would ever eschew free floating to participate in any yuan area, or for that matter to join any regional monetary cooperation led by the PRC with the yuan as an anchor currency. In Japan's view, the emergence of a yuan area is likely to be a divisive development that could derail—if not bring to an end—regional economic integration led by ASEAN+3. As noted earlier, it is also inconceivable that the Republic of Korea would join a yuan area, although the PRC has become a more important trade partner to the Republic of Korea than it is to other Asian countries. This means that if the PRC succeeds in broadening and deepening its economic and political relations with ASEAN to create a yuan area, while it fails to find a new modality of monetary cooperation

[10] The economic interests that bind the economies together have guided them to leave politics out of economics. It would not be as unrealistic as it may sound to expect that by reinforcing free trade in the region, internationalization of the yuan would unleash strong market forces that would establish its position as a credible regional currency. Park and Song (2011) have argued that the same market forces would pave the way for the formation of a currency area among the thirteen economies in East Asia.

with Japan and the Republic of Korea, there is the danger that ASEAN+3 will lose its rationale for steering regional economic integration in East Asia.

Global financial market participants have been, and will continue to be, dismissive of the importance of the CMIM as a regional supplier of liquidity, simply because it is too small to prevent contagion of a regional crisis in East Asia. The Group of Twenty (G20) has been exploring the possibility of creating a global liquidity safety net, which strengthens the role of both the IMF and regional arrangements such as the CMIM as its components. Would this new initiative gather momentum for regional economic cooperation in East Asia? The answer to this question will depend on the structure of a new safety net agreed upon among the G20 members. Barring any new G20 initiative, the CMIM as a regional liquidity support system may be relegated to a symbolic arrangement.

In view of differences in their interests, there will not be any renewed efforts to resuscitate the existing regional initiatives among the members of ASEAN+3. Unlike in 1997, most of the countries have weathered the 2008 global economic crisis better than expected and as a result, do not seem to see the need to create a large regional institution now that the IMF has established new lending facilities such as the Flexible Credit Line and Precautionary Credit Line.

The lack of interest in regional economic integration led by ASEAN+3 does not necessarily mean the demise of the integrationist movement in East Asia. Despite the setback in the ASEAN+3 process, the policymakers from the PRC, Japan, the Republic of Korea, and some of the members of ASEAN also realize the importance of stabilizing their bilateral exchange rates, the more so with the increase in intra regional trade in East Asia. There has been a long protracted discussion on creating a three-country FTA involving the PRC, Japan, and the Republic of Korea. The Republic of Korea is committed to negotiating a FTA with the PRC and is likely to resume its negotiations with Japan for a similar agreement.

Once the PRC, Japan, and the Republic of Korea make headway in forming a three-country FTA, there would be greater private sector pressure for the stability of intra-regional exchange rates. Even before the creation of a three-country FTA, the PRC, Japan, and the Republic of Korea could consider a less formal modality of exchange rate policy cooperation[11].

5. CONCLUDING REMARKS

East Asia is at the crossroads in its quest for regional financial cooperation and integration. The members of ASEAN+3 have lost much of their earlier enthusiasm for moving forward with the CMIM and ABMI–the two pillars of the ASEAN+3-led integrationist movement–in the wake of the 2008 global economic crisis. Except for the Republic of Korea, all other members of ASEAN+3 have weathered the 2008 global economic crisis much better than expected, and may not see the need to expand the CMIM.

This lack of interest has been compounded by a leadership problem: the PRC and Japan have not been able to work out their differences on many regional issues, failing to provide leadership vital to East Asia's integrationist movement. The eurozone crisis may have made many East Asia's leaders realize the vast scale of the tasks lying ahead in their commitment to regional economic integration.

[11] One suggestion is to establish a scheme of joint intervention among the PRC, Japan, and the Republic of Korea in the foreign exchange markets of the three countries, using their own reserves when one of the three currencies displays an excessive appreciation or depreciation. This scheme does not mean the creation of an exchange rate mechanism, but an ad-hoc arrangement to be activated when one of the markets of the three countries comes under destabilizing speculation. For this purpose, the CMIM could be restructured for short-term lending not only for crisis management, but also for exchange rate stabilization; alternatively, a new stabilization fund could be created.

In the meantime, the PRC has embarked on internationalizing the yuan, which is directed to ensuring its acceptance as a key regional currency, rather than a global medium of exchange, to be used mostly in its neighboring economies—namely the ASEAN states; Hong Kong, China; and Taipei,China. The PRC is likely to follow this regionalization route because it does not require a reform of financial liberalization as extensive as it would if the yuan were promoted as a global currency, and because these economies constitute a region with which the PRC needs to cement tighter economic relations.

Yuan internationalization is expected to lay the groundwork for forming a yuan area among the thirteen economies that include the ASEAN member states; the PRC; Taipei,China; and Hong Kong, China. The emergence of such a currency area will weaken a sense of solidarity and cohesiveness of ASEAN+3 as a regional cooperative arrangement. This will in turn undermine both the rationale and cooperative efforts for moving forward with the ASEAN+3 initiatives such as the CMIM and ABMI, simply because neither Japan nor the Republic of Korea can join the new yuan area.

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APPENDIX

Table A1: Rate of Renewal of Foreign Loans at the Republic of Korea's Banks

(Unit: 100 million US$)

Classification		2007	2008					2009
				1/4	2/4	3/4	4/4	1
Short-term	Total borrowing	764.6	795.8	208.6	270.6	237.7	86.3	33.3
	Due for repayment	739.8	957.9	210.3	270.8	250.9	235.9	38.7
	Rollover rate (%)	103.4	83.1	99.2	99.9	94.7	36.6	86.2
Long-term	Total borrowing	162.6	134.5	28.6	75	23.8	7.2	41.3
	Due for repayment	72.5	131.5	18.5	38.6	34.8	39.6	1.8
	Rollover rate (%)	224.3	102.3	154.6	194.3	68.4	18.2	2,320.8
Total	Total borrowing	927.2	930.3	237.2	345.6	261.5	39.5	74.6
	Due for repayment	812.3	1089.5	228.9	309.5	285.8	275.6	40.4
	Rollover rate (%)	114.1	85.4	103.6	111.7	91.5	33.9	184.6

Source: Bank of Korea, Economic Statistics System, http://ecos.bok.or.kr/.

Table A2: Exports by Principal Commodity in the Republic of Korea (2007)

Classification	2007	
	Amount (Billion US$)	Ratio (%)
Total	3,714.90	100.0
Semi-conductors	390.5	10.5
Non-line telephony apparatus	291.9	7.9
Displays	167.2	4.5
Computers	137.9	3.7
Cars	497.1	13.4
Chemicals	368.2	9.9
Iron, steel products	315.9	8.5
Machinery	287	7.7
Shipbuilding	268.6	7.2
Petroleum, petroleum products	242.1	6.5

Source: Bank of Korea, Economic Statistics System, http://ecos.bok.or.kr/.

Table A3: Frequency of the Republic of Korea's Interventions in the Won/Dollar Foreign Exchange Market

(Unit: days)

Year	2003	2004	2005	2006	2007	2008	2009	2010
Intervention	82	90	24	35	18	77	30	51

Note: The year 2010 comprises the period from January to October.

Source: Park and Kim (2008) and author's estimates